



StorTrends® 3500i

Dual Controller SSD Hybrid/Full Flash Storage Appliance

Highlights

- 3U SAN Storage Appliance
- 16 Hot-swappable SSD, SAS or NL-SAS Drives for a variety of capacity configurations
- Hybrid Array: Combination of SSDs and NL-SAS HDDs
- All Flash Array: SSD Only Configuration
- Dual Controller Configuration
- RAID 5, 6, 10, 50, 60 available
- Auto Tiering
- Advanced Snapshots
- Data Replication
- WDS Technology: Compression, Encryption, Data Deduplication and WAN Optimization
- Vertical Capacity Expansion
- VMware®, Microsoft® Hyper-V and Citrix® Xen™ Compatible
- Multi-Platform Replication

The StorTrends 3500i is a 3U rack mountable Dual Controller IP-SAN Storage solution with sixteen hot-swappable hard drives. It has 16 slots in the head node and is scalable up to 64 slots for 256TB with the addition of StorTrends 3202j JBODs. The StorTrends 3500i features the latest 64-bit version of StorTrends iTX Data Storage Software – StorTrends iTX 2.8 – which is optimized for this platform and designed to leverage the power and reliability of its dual controller design in a Hybrid or Full SSD Flash array.

This highly reliable storage appliance comes at an outstanding price, to provide true enterprise-class performance in an SMB-friendly package. It can be deployed in existing Ethernet networks and has the capacity to support the entire data storage needs of corporations & institutions. The auto-failover capability for its two Six Core controllers ensures that any disaster or interruption is handled smoothly, making the StorTrends 3500i a solid candidate for mission-critical data that requires “always on” availability and reliability.

INTRODUCTION

The 3500i is available in both hybrid and full SSD configurations. This innovation marks a tremendous step in the storage market for the company who has built its solid reputation around BIOS, Remote Management, RAID and now SSD based storage appliances.

One of the key benefits of the StorTrends 3500i is the availability of both SSD Caching and Tiering in the same array. Until today, Customers have been forced to choose between SSD Caching and SSD Tiering. Both offer benefits and limitations for different datasets and performance levels. However, allowing its Customers to have both and to tune the array to meet the exact performance needs is paramount. No longer are customers forced to guess or estimate the needed SSD cache or tier space, instead StorTrends allows customers to tune it to meet their exact requirements and as the business needs change in the future. By combining SSD Cache and SSD Tiering, users are able to enjoy near zero cache misses. If a cache miss occurs then StorTrends will read or write to/ from the SSD Tier for maximized I/O.

In combination with SSD Caching and Tiering, StorTrends ATV (Automatically Tuned Volumes) allows end users to tier their data at the volume level and allocate a certain percentage of their volume to the SSD layer while the less frequently accessed data remains on cost effective spinning disks. Where competitors would have to waste valuable Flash capacity with rarely accessed volume space, ATV ensures that no Flash space is under-utilized.

Another key feature of the StorTrends 3500i is Tiered Residency. How much of my database should reside on the SSD drives? With Tiered Residency users can select a percentage of the data volumes to reside on the SSD and the remaining portion of the volume will reside on lower cost spinning disk. With the StorTrends Workflow Management and Advance Storage Resource Management (SRM) charts the user can quickly see which volumes need additional performance and which volumes require less performance. Tiered Residency can then be modified on-the-fly to allow for more of the volume or less of the volume to reside on the SSD Tier.

“StorTrends has architected the 3500i to not only support SSD drives, but to harness the performance attributes of the SSD drives and turn that into huge benefits and costs savings for our customers. Gone are the days of throwing more disks at higher performance databases. With StorTrends and features like SSD Caching, SSD Tiering and Tiered Residency, we are seeing huge Opex savings for our Customers. Our Beta 3500i Customers are enjoying a TCO of only \$2/GB for flash storage. That’s unheard of in the industry today and we cannot wait to tell the world about these savings,” commented Subramonian Shankar, CEO for AmZetta Technologies, Inc.”

Based on our hands-on assessment, with the StorTrends 3500i array, it combines a complete and robust storage system architecture with solid state storage technology to create one of the best combinations of storage management capabilities and high performance.” commented Jeff Boles, Sr. Analyst for Taneja Group.

StorTrends iTX 2.8 Data Storage Software

Volume Replication

- Asynchronous
 - Snap Assisted Replication (SAR)
 - Data Archive mode on secondary appliance with SAR
 - WAN Data Services (WDS): Deduplication, Compression, Encryption and Link Optimization

Advanced Snapshots

- Up to 8,048 read-only & writeable snapshots per appliance with near-zero performance degradation
- Redirect on Write (ROW) Snapshot Technology
- Snapshot Scheduling
- Instantaneous rollback to any snapshot
- Snapshot mounting for file recovery Backup
- VSS-based backup support for Windows® Servers
- Backup agents for popular application servers like Microsoft® Exchange Server and Oracle® iSCSI Tape Backup Support

Storage Appliance Management

- Command line interface through RS232 & SSH
- "Single pane of glass" ManageTrends™ web GUI
- Simple customization and theme updates

Event Management

- Detailed Event Log
- Email Alerts
- SNMP, SNMP Traps (up to 4 destinations)

Storage Data Management

- Auto Tiering / ILM - Intelligent Data Migration across heterogeneous drive tiers (SAS and SATA/NL-SAS)
- Zoned Bit Recording (ZBR) for smart data placement within the same tier
- Storage Resource Management / Storage Reports
- Storage Pool Creation and Management
- LUN (Logical Unit Number) Creation and Management
- LUN Dynamic Volume Expansion
- Software RAID (5, 50) with RAID-RT™ Technology
- Auto RAID Rebuild

Applications Supported

- Oracle®, SQL Server, Microsoft® Exchange, all major virtualization suites such as VMware®, Microsoft® Hyper-V, Citrix® Xen™ and more.

SMART Monitor

- Monitors SMART events with continuous recording and analysis
- Periodic SMART checks with short and long DSTs
- Graphical display of vital disk information
- UPS Support

Smart UPS Support

- Supports Windows® OS/iTX/Linux as UPS slaves and many UPS makes & models

Advanced Features

Tiering and Caching on SSD

The innovative StorTrends 3500 provides both a Caching layer and Tiering for Read and Write performance. No longer choose between caching or tiering. StorTrends provides read and write caching to provide high performance to incoming IO loads. StorTrends intelligent data tiering also provides a dedicated SSD tier to ensure that your most heavily accessed data will get the performance it demands.

Tier Residency (QOS)

AmZetta's tier residency allows StorTrends users to customize the tiers in which their data resides. For highly critical and frequently an entire volume may reside on the SSD tier while a less performance intensive volume may be relegated to the lower performing traditional drives in a Hybrid configuration. This intelligent tiering ensures that your StorTrends appliance will provide performance in the most rigorous of environments.

Automatically Tuned Volumes (ATV)

StorTrends tiering works at the volume level by automatically tuning users' volumes to receive the required amount of performance. Users can choose to have entire volumes residing on specific performance tiers, or choose to have their individual volumes striped among different performance tiers to maximize capacity of high-performance drives.



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Software Features	
iSCSI Support	Yes
Advanced Snapshot Module	Yes
Maximum Number of Snapshots	8,048 per appliance (read-only/writeable)
Archiving with Deduplication	Yes
Asynchronous Replication	Yes (Snapshot Assisted)
WAN Data Services (WDS)	Yes
Active/Active and Active/Passive High Availability (HA) between controllers	Yes
Thin Provisioning	Yes
Auto Tiering/Information Lifecycle Management	Yes
Capacity Expansion with StorTrends 3203j JBOD	Yes
RAID Support	Robust RAID-RT™ with RAID 5, 6, 10, 50, 60
SSD Caching Support	Yes
SSD Tiering Support	Yes
Tier Residency Support	Yes

Hardware Features	
Hardware	StorTrends 3500i Dual Controller SAN
Form Factor	3U, 16 bay
Weight	96 lbs (43.5 kg)
Dimensions	17.2" x 5.2" x 25.5" (437 mm x 132 mm x 648 mm)
Power Supply Redundant	Yes
Power Supply Hot-Swappable	Yes
Hard Drive Bays	16
Hard Drive Interface	NL-SAS, SAS, Solid State Drive (Flash)
Hot Swappable Hard Drives	Yes
Drive Configuration Options	Available in Hybrid and Full Flask (SSD) Configurations
Number of Processors	Four (4) Intel® Six (6) Core processors with two (2) processors per controller
Memory	64 GB (32 GB per controller)